

51

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	2271-1
<b>Description:</b> Cabin Heater (206)	<b>Part Number:</b>	DSI 9051
<b>Dwg:</b> D2003 Rev. B; D2008 Rev. -; DSI 9051 Rev. A	<b>Qty:</b>	2 Kit(s)
<b>Ref:</b>		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler (1) DSI 9051 consists of (2) D2003-077; (4) D2008-001	KJ	05.03.16	2
2	DC	Photocopy bluefile and create labels as per PPP DSI 9051 CHG001	DK	05.03.28	2
3	GA	Cut (4) D2008-001 per (1) DSI 9051 Kit as per Dwg D2008 Material: Kydex 100, 0.028" thick (M-KYDEX100) Identify as D2008-001 Batch: M16909	Z	05.03.28	2
4	GA	Deburr	Z	05.03.28	2
5	GA	Cut (2) D2003-077 blanks per (1) DSI 9051 Kit Cut blanks: 6.250" long as per template D2003-077 Material: 6061-T6 tubing 0.375OD x 0.035" wall (M6061T6T0.375W.035) Identify for D2003-077 Batch: M12852	Z	05.03.29	2
6	GA	Form, drill & flare as per template D2003-077	Z	05.03.29	2
7	GA	Assemble as per Dwg D2003 Pick: Packing Kit Qty Part Number Description Batch 2 5/16"-.200 Set Screw M16999 2 AN818-6D Nut M16322 2 MS20819-6D Sleeve M16322 Identify as D2003-077 Loctite threadlock M16507	Z	05.03.29	2
8	QC5	Inspect work to Step 7	AB	05.03.29	2
9	ST	Pick: Packing Kit (Note: D2003-077 & D2008-001 are on BOM as material from Steps 3 & 8) Qty Part Number Description Batch 2 D2003-077 Jet B22714 4 D2008-001 Doubler B22714 2 AN833-6D Elbow M16323 2 AN924-6D Nut M13943/M16323	CL	05/03/29	2
10	QC4	Inspect Kit 100% for Completeness on the W/O	SB	05/03/29	2
11	PK	Identify and pack for shipping as per PPP DSI 9051 draft	CL	05/03/29	2
12	AC	Cost / part 92.32	SAC	05.03.30	2
13	DC	Close W/O 92.32 Inspect Level 21	KJ	05.03.29	2

Rev	Date	Change	Revised By	Approved
A	04.05.17	New issue	KJ/JLM	

RELEASED  
05/03/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

5/12  
**DART AEROSPACE LTD****Work Order:**

22714

**Description:** Cabin Heater (206)**Part Number:**

DSI 9051

**Dwg:** D2003 Rev. B; D2008 Rev. -; DSI 9051**Qty:**

2 Kit(s)

**Ref:**

Page 1 of 1

Step	Location	Procedure	By	Date	Qty																				
1	DC	Issue Traveler (1) DSI 9051 consists of (2) D2003-077; (4) D2008-001	KJ	05.03.16	2																				
2	DC	Photocopy bluefile and create labels as per PPP DSI 9051 CHG001 WK 11 KJ																							
3	MV	Cut (4) D2008-001 blanks per (1) DSI 9051 Kit Cut blanks: 2.100" x 2.100" x 0.028" thick Material: Kydex 100 (M-KYDEX 100) Identify for D2008-001 Batch: M16909																							
4	MV	Machine as per Folio and Dwg D2008 Stack of 4 Fabricate by hand Identify as D2008-001																							
5	QC2	Inspect parts as they come off the CNC machine																							
6	QC5	Second check																							
7	MV	Deburr																							
8	GA	Cut (2) D2003-077 blanks per (1) DSI 9051 Kit Cut blanks: 6.250" long as per template D2003-077 Material: 6061-T6 tubing 0.375OD x 0.035" wall (M6061T6T0.375W.035) Identify for D2003-077 Batch: _____																							
9	GA	Form, drill & flare as per template D2003-077																							
10	GA	Assemble as per Dwg D2003 Pick: Packing Kit <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>2</td><td>5/16"-200</td><td>Set Screw</td><td>_____</td></tr><tr><td>2</td><td>AN818-6D</td><td>Nut</td><td>_____</td></tr><tr><td>2</td><td>MS20819-6D</td><td>Sleeve</td><td>_____</td></tr></table> Identify as D2003-077	Qty	Part Number	Description	Batch	2	5/16"-200	Set Screw	_____	2	AN818-6D	Nut	_____	2	MS20819-6D	Sleeve	_____							
Qty	Part Number	Description	Batch																						
2	5/16"-200	Set Screw	_____																						
2	AN818-6D	Nut	_____																						
2	MS20819-6D	Sleeve	_____																						
11	QC5	Inspect work to Step 10																							
12	ST	Pick: Packing Kit (Note: D2003-077 & D2008-001 are on BOM as material from Steps 3 & 8) <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>2</td><td>D2003-077</td><td>Jet</td><td>_____</td></tr><tr><td>4</td><td>D2008-001</td><td>Doubler</td><td>_____</td></tr><tr><td>2</td><td>AN833-6D</td><td>Elbow</td><td>_____</td></tr><tr><td>2</td><td>AN924-6D</td><td>Nut</td><td>_____</td></tr></table>	Qty	Part Number	Description	Batch	2	D2003-077	Jet	_____	4	D2008-001	Doubler	_____	2	AN833-6D	Elbow	_____	2	AN924-6D	Nut	_____			
Qty	Part Number	Description	Batch																						
2	D2003-077	Jet	_____																						
4	D2008-001	Doubler	_____																						
2	AN833-6D	Elbow	_____																						
2	AN924-6D	Nut	_____																						
13	QC4	Inspect Kit 100% for Completeness on the W/O																							
14	PK	Identify and pack for shipping as per PPP DSI 9051																							
15	AC	Cost / part _____																							
16	DC	Close W/O Inspect Level 21																							

PRELIMINARY ISSUE

**PRELIMINARY ISSUE**

Rev	Date	Change	Revised By	Approved
A	04.05.17	New issue	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



DESIGN AS	DRAWN BY GP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED HE	APPROVED AS	DRAWING NO. D2003	REV. B SHEET 1 OF 2
DATE 99.06.08		TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS	
A	90.04.09	NEW ISSUE	
B	99.06.08	UPDATE PER TEMPLATES; ADD P/N'S; 0.025 TUBING NOW 0.035 (TSR1049)	

RELEASED  
99.06.08 HE

P/N	TEMPLATE	HEATSLEEVE LENGTH <sup>1</sup>	CUT LENGTH OF TUBE <sup>2</sup>	MS20819-8J SLEEVE	AN818-8J NUT	MS20819-8D SLEEVE	AN818-8D NUT	MS20819-6D SLEEVE	AN818-6D NUT	DESC.	MATERIAL <sup>4/87</sup>	VENDOR OR SPEC
D2003-001	T2003-001	5.2	6.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-003	T2003-003	7.3	8.12					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-005	T2003-005	9.8	10.62					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-007	T2003-007	20.0	19.63					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-009	T2003-009	12.38	12.44					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-011	T2003-011	33.31	32.38					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-013	T2003-013	12.7	13.54					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-015	T2003-015	17.2	18.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-017	T2003-017	17.0	16.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-019	T2003-019	9.8	10.62			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-021	T2003-021	N/A	2.25			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-023	T2003-023	4.5	5.33			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-025	T2003-025	9.8	10.60			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-027	T2003-027	7.25	7.38			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-029	T2003-029	17.2	18.00			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-031	T2003-031	14.6	15.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-033	T2003-033	29.75	29.62	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-035	T2003-035	24.7	27.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-037	T2003-037	24.81	23.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-039	T2003-039	34.0	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-041	T2003-041	6.0	5.88	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-043	T2003-043	11.7	10.75	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-045	T2003-045	3.50	2.44	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-047	T2003-047	5.56	5.56	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-049	T2003-049	33.2	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-077	T2003-077	N/A	6.25					1	1	JET	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-101	T2003-101	13.25	13.13					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-103	T2003-103	12.38	12.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-105	T2003-105	10.75	10.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-107	T2003-107	12.75	12.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-109	T2003-109	8.25	8.125			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-600/6
D2003-111	T2003-111	4.75	4.625			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-600/6
D2003-116	T2003-116	4.0								HEATSLEEVE	M2650-20 CRINKLE-SOFT	STRATOFLEX
D2003-120	T2003-120	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-14	T2003-14	4.0								HEATSLEEVE	M2650-14 CRINKLE-SOFT	STRATOFLEX
D2003-16	T2003-16	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-205	T2003-205	9.75	9.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-207	T2003-207	3.75	3.75					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6

SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER

NO. 22714

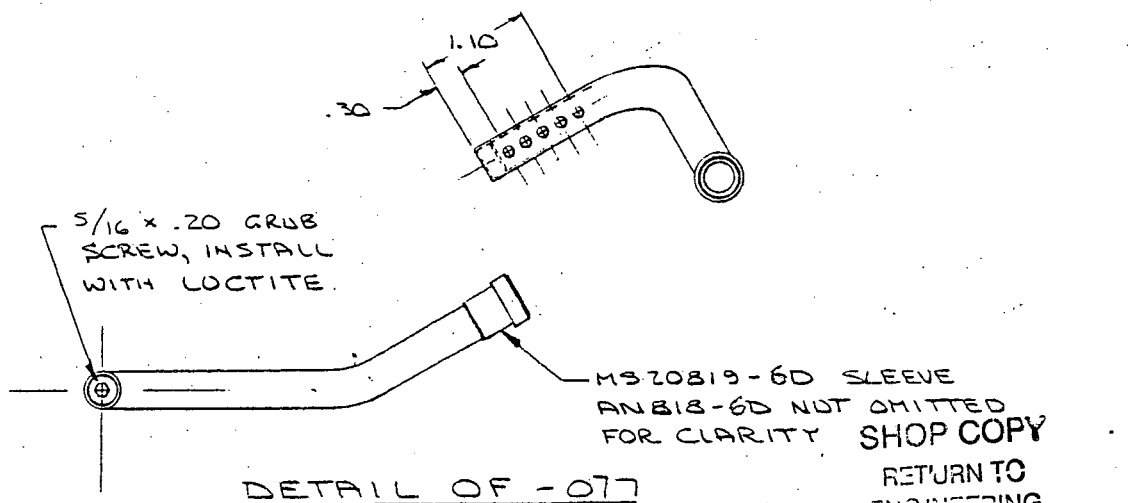


DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2003	REV. 8 SHEET 2 OF 2
DATE 99.06.08		TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS	

**RELEASED**  
99.06.08 *[Signature]*

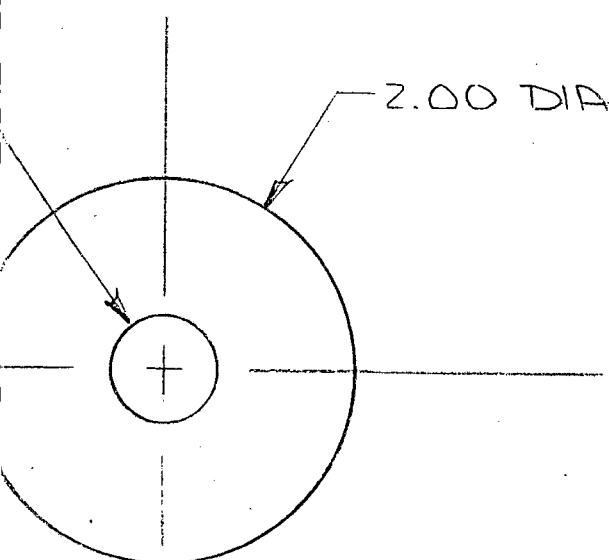
**Notes:**

- (1) USE STRATOFLEX M2650-6 CRINKLE-SOFT HEATSLEEVE.
- (2) TUBING ASSEMBLIES TO BE CUT AND BENT IN ACCORDANCE WITH TEMPLATES.
- (3) TUBES TO BE FLARED 30° TO MATE WITH FITTINGS MADE TO MS33514.
- (4) ENSURE SEAMLESS TUBING IS USED.
- (5) INSTALL HEATSLEEVE OVER ALL TUBES WITH A DESIGNATED LENGTH OF HEATSLEEVE PER THE PARTS LIST.
- (6) 5052 (VW-T-700/4) TUBING MAY BE SUBSTITUTED WHEN 6061 TUBING IS NOT AVAILABLE.
- (7) 0.049 WALL THICKNESS CRES TUBING MAY BE SUBSTITUTED WHEN 0.035 IS NOT AVAILABLE.
- (8) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.



RETURN TO  
ENGINEERING  
FOR REVIEWED COPY  
FOR AMENDMENT  
WITHOUT NOTICE

WORK ORDER  
NO. 22714



DETAIL OF - 001

.032 (REF.)

SHOP COPY  
RETURN TO  
ENGINEERING  
UNOFFICIAL COPY  
FOR NOTICE  
WORK ORDER  
NO. 22714



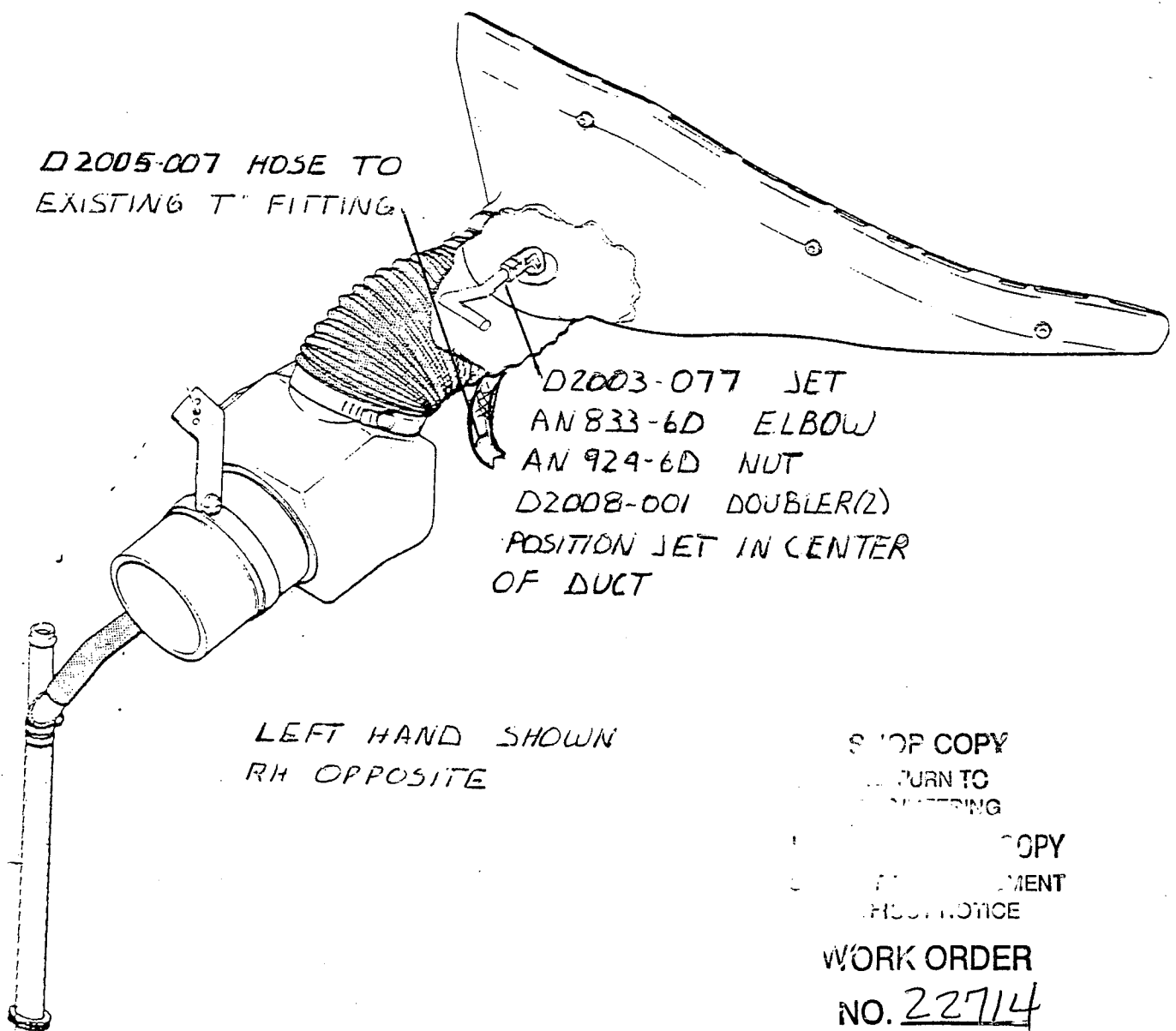

D2003-001		DOUBLE	.032 THK KYDEX 100
PART NO.	ITEM	DESCRIPTION	SPEC./VENDOR
CONTRACT NO.		DART AERO ACCESSORIES INC	
DRAWN BRADLEY	DATE 90.12.01	TITLE DOUBLE	
DESIGN BRADLEY	DATE 90.12.01	CODE D 2008	
STRESS		REV.	
CHECKED		SCALE 1:1	
CUSTOM		SHT 1 OF 1	

REVISION	THIS DRAWING IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE PERMISSION OF DART AERO.	RIVET CODE SHALL BE PER NAS 523		QTY. REQUIRED
DRAWN		BASIC CODE	DIA DASH NO N=HEAD NEAR SIDE F=HEAD FAR SIDE	APPROVAL
APPROVED		D=HIMPLE DIGIT=NO OF SHEETS C=COUNTERSINK	LENGTH DASH NO W=SPOTWELD	
DESCRIPTION OF CHANGE		BASIC CODES BB=MS20470AD BB=MS20426AD		
REQUIREMENTS - UNLESS OTHERWISE SPECIFIED		REPORT ALL DISCREPANCIES - DO NOT SCALE		
GENERAL		LIMITS		
1. DIMENSIONS ARE IN INCHES 2. SURFACE ROUGHNESS 125 3. REMOVE SHARP EDGES .015 MAX 4. THREADS PER MIL - S - 7742 5. HOLES PER AND 10367		1. TOLERANCES - XX ± .030 XXX ± .010 2. ANGLES 1 W 3. PARALLELISM 1.0025 4. ECCENTRICITY .005 MAX. 5. SYMMETRY ABOUT ALL M/C CENTRE LINES .005		

D 2008

DESIGN <i>BW</i>	DRAWN BY <i>BW</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. DSI 9051	REV. A SHEET 1 OF 1
DATE 96:10:30		TITLE ADDITION OF ASPIRATORS	

DART SERVICE INSTRUCTION DSI 9051  
 AMMEND DRAWING D206-570  
 ADD ASPIRATOR JETS AS OPTION TO INSTALLATION





# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Mar 16, 2005  
07:30 am

Work Order No : 0022714  
Project Name : DSI 9051  
Project For : WK512  
Work Order Type : Main  
Main WO Number :  
House Part Number : \*DSI 9051  
Description : Aspirator Jet addition  
Manufactured : Yes  
Amount Req'd : 2  
Amount Done : 0  
Start Date : 03-15-05  
Est Finish Date : 03-24-05  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Mark Up : 0.000%  
Actual Mark Up : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	0.00	0.00	0.00	0.00	0.00
Engineering Hours	0.00	0.00	0.00		
Engineering Cost	0.00	0.00	0.00	0.00	0.00
Production Hours	0.00	0.00	0.00		
Production Cost	0.00	0.00	0.00	0.00	0.00
Packaging Hours	0.00	0.00	0.00		
Packaging Cost	0.00	0.00	0.00	0.00	0.00
OverHead Hours	0.00	0.00	0.00		
OverHead Cost	0.00	0.00	0.00	0.00	0.00
CNC Hours	0.00	0.00	0.00		
CNC	0.00	0.00	0.00	0.00	0.00
Misc. Hours	0.00	0.00	0.00		
Misc.	0.00	0.00	0.00	0.00	0.00
Burden	0.00	0.00	0.00		
Total Cost	0.00	0.00	0.00		
Mark up	0.000	0.000			
Selling Cost	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	0.00	0.00
Profits/(Loss)	0.00	0.00